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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Hirofumi Yura et al.

Serial No.:

09/937,991

Filing Date:

September 28, 2001

Title:

"FUNCTIONALIZED GLYCOSAMINOGLYCAN POLYMER AND MEDICAL INSTRUMENTS AND

DRUGS BY USING THE SAME"

Docket No.:

33944

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Asst. Commissioner for Patents Box PCT Washington, D.C. 20231

Sir/Madam:

Pursuant to Rule 56, applicants are submitting the enclosed PTO Form 1449, along with a copy of each reference cited therein. In this Supplemental Information Disclosure Statement, and the prior Information Disclosure Statement mailed January 31, 2002, four (4). Japanese publications were listed:

Publication 1: JP-A-H10-324702 Publication 2: JP-A-H08-504841 Publication 3: JP-A-H06-510783 Publication 4: JP-A-H08-85704

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner of Patents, Washington, D.C. 20231 on the date indicated below.

Jeffrey J. Sopko Name of Attorney for Applicant

/

February 5, 2002

Date

Signature of Attorney

The following information is provided regarding these publications:

Publication 1 describes a heparinoid homopolymer or copolymer containing a monomer unit represented by the following formula I.

In formula I, R<sup>1</sup> represents an H or methyl group, R<sup>2</sup> represents a crosslinking element, and A represents a sulfated polyol, polyamine group or a (poly)amine(poly)ol group which optionally contains one or more acetal or aminal carbonyl functional groups. Specifically, the substituent group A in formula I is a sulfated linear sugar alcohol having 5 or 6 carbon atoms, such as pentitol or hexytol, or a sulfated pentose or hexose.

Publication 2 describes an interpenetrating polymer network (IPN) prepared by mixing a hyaluronic acid or esters thereof with a synthetic polymer, such as polyacrylic acid, polyacrylamide, polyvinylalcohol, and drying the resulting mixture.

Publication 3 describes a biologically active conjugate comprising a substantially straight-chained organic polymer having a lot of functional groups distributed along its backbone and having at least 20 glycosaminoglycan units covalently bound to the backbone via the functional groups. The polymer backbones of Publication 3 are preferably selected from natural or synthetic polypeptides, polysaccharides, and aliphatic polymers.

Publication 4 discloses a glycosaminoglycane derivatives such as those represented by the following formula (2).

$$GAG - R' - NHCH2CH2NHCH2CH O CH2$$

$$OH$$

$$OH$$

$$(2)$$

These derivatives were copolymerized with acrylicamide to form a polymeric solid support for use in electrophoresis.

Respectfully submitted, PEARNE & GORDON LLP

By:\_

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